Advanced Metering Infrastructure (AMI) Update

June 2006

I. SDG&E in A.05-03-015 requests approval of their preferred full AMI deployment strategy for implementation in the fourth quarter of 2007 and cost recovery mechanism by January 26, 2006

- **On March 28, 2006 SDG&E submitted supplemental testimony updating and revising its estimates of AMI costs and benefits based on the results of the comprehensive request for proposal (RFP) process and the final demand response impacts estimated in the State-Wide Pricing Pilot (SPP).**

  - Full deployment includes the replacement of ***1.4 million electric meters and 900,000 gas meters by 2011***. SDG&E proposes to recover the remaining book value of the installed costs for the existing meters.
  - SDG&E's ***business case analysis estimates that $635 million is the cost*** of full scale deployment of AMI and ***$762 million*** (NPV 28 year period) in ***operational*** ($471 million) and ***demand response*** ($235 million) ***benefits***.
  - SDG&E's business case analysis shows that operational benefits from AMI alone do not justify full or partial deployment of AMI;
  - ***The demand response benefit calculation assumes implementation of dynamic rates as the default rate structure (CPP) for C&I customers with demand of at least 20kW by 2011. Residential customers are able to participate in a voluntary "Peak Time Rebate" program.***

- **On August 25, 2005, the Commission approved $3.4 million in funding for SDG&E's AMI pre-deployment activities for the period of September 2005 through March 2006 and an additional $5.9 million for the period March 2006 through the end of 2006**

  - SDG&E will hold **quarterly meetings** to brief interested parties on the progress of the phase 1 activities

- ***Phase 2 of SDG&E's AMI project application will address the cost-effectiveness and merits of SDG&E's full deployment AMI proposal***

The July 1, 2005 ACR set forth the following ***criteria for reviewing SDG&E's AMI proposal***:

- The proposed AMI must ***meet the minimum functionality*** criteria set forth in the May 9, 2005 ACR;
- The proposed AMI ***investment must provide sufficient benefits to ratepayers*** (operational savings and demand response benefits);
- SDG&E must show that it has ***a serious plan for accomplishing the task of integrating*** the AMI investment into its operating systems.

- **A May 19, 2006 ALJ ruling directed SDG&E to file supplemental testimony** specifically outlining its **critical peak pricing proposals with the same** parameters as proposed by PG&E in its AMI proceeding. The testimony will also provide a cost-benefit analysis of the adapted CPP proposal.

The May 19 ruling also modified the schedule to allow for the supplemental testimony and provide intervenors more time to develop testimony. The new schedule is as follows:

Phase 2 Procedural Schedule

SDG&E Supplemental Testimony	June 16, 2006
Intervenor Testimony	August 1, 2006
Rebuttal Testimony	September 1, 2006
Evidentiary Hearings	September 25 – October 6, 2006
Concurrent Briefs	October 27, 2006
Reply Briefs	November 10, 2006
Proposed Decision	January 2007
Commission Decision	February 2007

II. On September 22, 2005 the Commission approved $49 million for PG&E's pre-deployment AMI activities in (A.) 05-03-016

AMI pre-deployment activities include:

- ***Network design and software integration*** with PG&E's systems for billing, records, customer information, and other activities;
- ***System Acceptance Testing (SAT)*** involving limited (approximately 5,000 meters) acquisition and deployment of meters, network equipment, and system hardware to develop end-to-end test of equipment and system integration;
- ***Development of a logistic management plan and tool to control meter*** installation to support pre-deployment activities, and eventually full deployment activities;
- ***Development of training materials and written Standard Operating Procedures*** for installation/operations/maintenance procedures for the selected AMI meter and network equipment

- ***On October 24, 2005, TURN filed a motion for rehearing of D.05-09-044 which is currently pending Commission action.***

III. On June 16, 2005, PG&E filed (A.) 05-06-028 requesting approval of its full AMI deployment strategy at an estimated cost of 1.75 billion[1] ($2.264 billion 20-year present value revenue requirement)

[1] On October 13, 2005, PG&E amended its application filing and revised its estimated AMI project implementation costs from $1.46 billion to $1.75 billion. This amount includes the $49 million in AMI pre-deployment costs authorized in D.05-09-044.

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- PG&E requests a Commission determination that:
  1. Allows PG&E to ***recover the actual cost of the AMI project without further reasonableness review***, if the actual cost of project is ***less than or equal to $1.61 billion*** and to recover additional reasonable amounts;
  2. Approves PG&E's ratemaking proposals and mechanisms for the Project, including ***authorizing PG&E to increase gas and electric rates on July 1, 2006, and on January 1, 2007, 2008, and 2009***.

- PG&E's AMI ***project consists*** of the ***AMI System, AMI Interface System, Installation Services, and Project Management and System Integration***

  1. ***The AMI System*** consists of "installation ready" ***new and/or refurbished meters and AMI modules***, the AMI communication network elements, and the AMI System Controller.
     - PG&E's proposes to automate 100% of all electric and gas meters within 5 years. PG&E's plan is to retrofit more than half of the electric meters and most of the gas meters with modules capable of collecting and transmitting customer usage data.
     - PG&E proposes using power line carrier (PLC) technology to retrieve the meter data and a fixed radio frequency network for the collection and transmission of daily gas usage data.
     - PG&E proposes using a wide area network to control and manage the interval data and transmitted to its information systems for billing and viewing by the customers.
  2. ***The AMI Interface System*** is the software that packages the raw metering data from the system controller and prepares it for PG&E's billing system.
  3. ***The Installation Services*** consists of the equipment, software, labor, management and other required resources for the installation of the new and refurbished electric and gas meters, and the local network equipment.
  4. ***Project Management and System Integration***- project management activities include ensuring budget, scope, and management. System integration consists of information technology integration and management support to integrate the AMI functionality with PG&E's billing system, outage management, SAP and other information related systems.

- **PG&E's proposes voluntary CPP rates as a supplemental tariff for residential and small C&I customers below 200 kW**

  1. PG&E proposes an ***"overlay" CPP rate design approach*** to maintain customer class revenue neutrality and the exiting tier rate structure for residential customers;
  2. PG&E CPP rate offering customers a ***first-year "bill protection"*** to encourage participation and get customers use to the CPP rate;
  3. CPP tariffs would be offered as the AMI meters are deployed;
  4. Customers would be allowed to choose between their standard tariff, TOU-only, or TOU-and-CPP;

CPP Proposed Rates

Customer Class	CPP-Rate	Non-CPP usage credit per kWh	Additional credit per kWh	Comments
Residential	$0.60/kWh (same rate that was tested in the SPP)	$0.02992	$0.01/kWh applied to all usage in Tier 3 and above	CPP rate based on $45 per KW-year/75 CPP hrs; limit 15 CPP events per summer; 5 hr limit per CPP event
Small commercial light and power customers	$0.75/kWh	$0.0272	$0.005/kWh applied to all usage during the summer period	CPP rate based on $45 per KW-year/60 CPP hrs; limit 15 CPP events per summer; 4 hr limit per CPP event
Medium commercial c	$0.75/kWh	$0.02320	$0.005/kWh applied to all usage during the summer period	Same assumptions as the CPP rate for small C&I above
Agricultural	No proposed CPP rate at this time			

Procedural schedule:

Testimony by non-utility parties	January 18, 2006
Rebuttal testimony	February 8, 2006
Evidentiary hearings	February 27- March 13, 2006
Opening briefs	April 3, 2006
Reply briefs	April 14, 2006
Proposed Decision	June 20, 2006
Commission Decision	July 20, 2006

IV. SCE in Application (A.) 05-03-026 requested approval of its AMI deployment strategy and cost recovery of $31 million to develop an advance integrated meter (AIM)

- SCE's proposed ***AMI strategy is to design and develop a new advance integrated meter (AIM) platform*** that integrates new technologies to increase functionality and operational efficiencies at a lower cost than the best currently available technologies.
- SCE requested approval of ***$31 million*** to cover the costs of the first two phases of AIM project- ***$12 million to design and develop the meter (Phase I) and $19 million***

for beta development and pilot deployment (phase II). Both phases were projected to take 3 years (18 months for each phase.)

- SCE estimates that the process from ***design to completion of full AMI deployment would take approximately 7 1/2 years***.

- SCE's ***AMI strategy differs from the other two IOUs in that it is pursuing a "cutting edge" form of AMI*** technology. PG&E and SDG&E plan to use AMI technologies that are proven or currently in use. One of the issues with SCE's proposed approach is that it does not guarantee that the AMI technology may be feasible or cost effective.

- SCE's original ***AMI business case analysis showed a loss of $952 million for full deployment*** strategy and ***a loss of $129 million for partial deployment*** (15 year NPV).

- **On December 1, 2005, the Commission approved (D.05-12-001) a multi-party settlement agreement on Phase 1 of SCE's AMI application and also closed the proceeding**

  - The Commission approved **$12 million in ratepayer funding** for SCE's proposed Advanced Integrated Meter (AIM) Project over an 18 month period to define the meter and system requirements and determine whether such AIM technology is commercial availability**.**
  - SCE will **hold quarterly meetings** to brief interested parties on the progress of the phase 1 activities.
  - **SCE will need to file a new application and supporting testimony should it seek additional ratepayer funding to implement its AIM project.**